# INSTILLING CRITICAL THINKING IN INDIA

Ankita Chandra

Assistant Professor, Department of Management Studies

Periyar Maniammai Institute of Science & Technology, Thanjavur, Tamil Nadu

Abstract: This paper aims to identify the necessities of instilling critical thinking in India and also the challenges to be overcome to achieve such an undertaking. According to Socrates the unexamined life is not worth living. Critical thinking is a type of reasonable, reflective thinking aimed to analyze and perform the rightful action. It is important that we critique, analyze and develop the quality of our thinking which naturally boosts decision making processes. It also attempts to track the trends of critical thinking throughout the Indian history. A few strategies need to be implemented at the classroom level to bring about the much needed change in the current education scenario.

Index Terms: Critical thinking, Scientific Temper

#### I. INTRODUCTION

Critical thinking is intellectually disciplined process of actively and skillfully conceptualizing, applying analyzing, synthesizing and evaluating information obtained from, or generated by observation, experience, reflection, reasoning, or as a guide to belief and action. It is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth and fairness. In fact it is self-guided, self disciplined thinking which attempts to reason at the highest level of quality. Critical thinking in fact is a crucial skill for living life.

According to the Constitution of India, it is a fundamental duty of every citizen "to develop scientific temper, humanism and the spirit of inquiry and reform." <sup>[1]</sup> India has got 60<sup>th</sup> rank in the Global Innovation Index, a list where China has got the 25<sup>th</sup> place. The Indian Institute of Sciences, the front-runner of the Indian research initiatives is ranked in the 250-300 bands in the World University Rankings 2018. This is the dilemma of the Indian academia as we have strolled through our 70<sup>th</sup> year of Independence. <sup>[2]</sup>

#### II. CRITICAL THINKING:

Critical thinking is more than just thinking clearly or rationally. It's about thinking independently and refers to the capacity of brain to analyze, assess and improve thinking. A person endowed with an open and critical analyzing ability develops the power of intellectual integrity, humility, empathy and intellectual sense of justice and confidence in reasoning ability. Critical thinking is the art of analyzing and evaluating thinking with a view to improve it.

The Indian context of the words 'critical thinking' and 'scientific temper' is best summarized by the first Prime Minister of India, Pt. Jawaharlal Nehru as follows.<sup>[3]</sup>

"What is needed is the scientific approach, the adventurous and yet critical temper of science, the search for truth and new knowledge, the refusal to accept anything without testing and trial, the capacity to change previous conclusions in the face of new evidence, the reliance on observed fact and not on pre-conceived theory, the hard discipline of the mind-all this is necessary, not merely for the application of science but for life itself and the solution of its many problems." Observing the contemporary India, one may be misled to think that India had always been intolerant towards views foreign to her or directly in contradiction with her own views and values. But like every other generalizations, this not entirely true at any point of time or place in India.

### **III. EDUCATION IN INDIA**

Right from the ancient times, India had a rich educating society and culture. The primary mode of education was through the Gurukula system. The writings of every major religions of India contain verses providing us an account about the existence of the Gurukula system in the Indian subcontinent.<sup>[4]</sup> Although we see glimpses of argumentative and critical forms of communication in the Upanishads, it mostly limited itself with theology or mystic philosophies and involved lots of repetitive learning.

Ancient India witnessed many formal debates organized by the Heads of Kingdoms to debate on philosophical and religious differences. <sup>[5]</sup> Even during the British era, there were some who had truly noble aims and ambitions to uplift the masses of India out of ignorance and superstition but the consensus was to teach the Indians enough to be governed without the nuisance of innovation, critical thinking or scientific temper.

## **IV.POST-INDEPENDENCE**

After Independence, the Union Government constituted the University Education Commission in 1948 under the Chairmanship of Dr. S. Radhakrishnan in pursuance of the recommendations of the Central Advisory Board of Education and also of the Inter-University Board. The special interest in the field of education is evident from the fact that the Indian Science Congress Session which is held every year is always inaugurated by the Prime Minister. IITs, NITs and the IISc were established in order to bring world class education in India. Rationalist movements founded by visionaries like Tanthai Periyar, Dr. Ambedkar, Dr. R. P. Paranjpe etc. continuously advocated for more scientific and rational curricula in schools and colleges. Yet the signs and symptoms of a much deeper problem within the education community began to appear in the subsequent years. India is still struggling to wither away from the colonial and cleric producing education system. Although many commissions and committees has recommended repeated suggestions, there appears to be an indifferent attitude on the part of the government, which either lacked the will or the resources to implement it totally.

## V. THE RISE OF CONSERVATISM

Throughout history, there existed a section of leaders who romanticized the past and rejected the present. The call to look back to the Vedic era of life and customs were International Journal of Advanced Scientific Technologies, Engineering and Management Sciences (IJASTEMS-ISSN: 2454-356X) Volume.4, Issue.1, January.2018

repeatedly made and being made even today. The science society is also divided on this issue where many consider science as a profession and not as a way of life.

## VI. REMNANTS OF A REVOLUTION

Most of the rules and regulations of the current education system were framed during the beginning of the Industrial Revolution. It demanded silent, obedient and complying workers to boost production. Schools and colleges produced students who would go on to aid mass production of goods and services in mills and factories. A good follower was rewarded both in the academia as well as in the industry. But this process began to slow with the advent of the automation and robotics. The robots took over many aspects of mass production from humans and left them jobless. The technology of manufacturing changed drastically in the last century but there is no such drastic change in the techniques of teaching or learning. The 21<sup>st</sup> century youth is expected to be innovative, creative and think out the box or simply put, to be able to do some utilitarian work that the robots cannot do as of now.

# VII. THE SPIRIT OF ARTIFICIAL INTELLIGENCE

Although true artificial intelligence reaching the point of self-awareness is still a work of fiction, it has already started to replace its lowly human competitors in many fields. The skill development of the masses is not at the same pace as the growth of the Artificial Intelligence technology. The millions of skilled, semi-skilled manufacturing, service and other auxiliary sector employees are particularly vulnerable.

# VIII. THE PROBLEM OF POLITICS

Although the institutions try to refrain from participating in the political developments of a country, educational institutions can never be truly apolitical particularly in a Third World Democracy. They have the duty to nurture future leaders as well as responsible citizens who would elect such leaders. Because of this, governments always try to set and intervene in the policies and day-to-day working of an educational institution. The autonomy of operations in universities is still a far cry. The government both directly or indirectly dictates admission procedure, union elections and examinations and also intervenes in the panel action taken by the authorities against the students involved in unlawful activities within the campus. Further, the appointment of faculty and sub-ordinate staff, grant allocation and disciplinary action is also not very fair. This makes it impossible to modify the system.

# IX. NURTURING CRITICAL THINKING

It is relevant to mention that critical thinking reflects the quality of our lives and that what we contribute, in fact our thoughts, action and inaction. It is the art of analyzing and evaluating thinking with a view to improving it. A well nurtured critical thinker possesses some essential features:

- Raising vital questions and problems, formulating them clearly and precisely;
- Gathering and assessing relevant informations, using abstract ideas to interpret it effectively;
- Arriving to well reasoned conclusions and solutions;
- Having an open mind, recognizing and assessing things; and

• Communicating effectively with others in order to solve the intricate problems.

Thus critical thinking is self directed, disciplined, self monitored and self corrective way of life. It requires rigorous standard of excellence and meaningful authority of its use. It also entails effective communication and problem solving abilities.

It is pertinent to mention here that the critical thinking is the art of analyzing and evaluating thinking with a view to improving it. <sup>[6]</sup> A well cultivated critical thinker raises vital questions and problems, formulates them clearly and precisely. He has an open mind and has an aptitude for recognizing and assessing the assumptions and implications. He collects relevant information, using ideas to interpret it effectively. There are five essential dimensions of critical thinking which includes analysis, assessment, disposition, skills and abilities of thought along with working out obstacles to critical thought.

I would like to give a few suggestions for instilling critical thinking in Indian classrooms. Development of scientific temper can best be managed by adopting some of the following proposals:

• The students should be given opportunities to brain storm and analyze things. Class room discussions are great way to encourage open-mindedness and creativity. Questions having more than one answer encourage the students.

• Students should be given sufficient time to think to develop ideas.

• One should be encouraged to make questions so as to utilize all the faculties of his enquiring mind.

• One should be allowed to develop critical thinking, enable him/her to understand the basics of science and technology.

• Simple experiments/ observations can satisfy lot of queries, like absorption of water in plants, floating of soap case and sinking of soap in the bathroom tub.

• Observing migration of birds, nest building and growth & metamorphosis of insects etc.

• One should be promoted to solve riddles and brain teasers so as to broaden his/her mental alertness.

• Games like chess and other electronic device based puzzles also enable to develop an aptitude for logical sequencing and strategic skills.

• Regular discussion by the peers must be carried out to create a scientific bent of mind. People must be involved in group discussions and debates to enable them develop a habit of interaction through brilliant arguments.

• There should be better procedure devised for the students as well as for teachers to venture into the possibility of using the monitorial education system whenever and wherever possible and to bring in the system an audit mechanism to ensure that the students and the teachers regularly update and adapt themselves to the changing tides of academia and the industry.

Frequent group discussions, debates, vital analysis sessions should be organized in the schools on regular basis to induce critical thinking amongst the students and the teachers. Moreover, more autonomy should be given to the lower sections hierarchy to device a system more suitable to the local realities.

#### International Journal of Advanced Scientific Technologies, Engineering and Management Sciences (IJASTEMS-ISSN: 2454-356X) CONCLUSION

It is henceforth evident that instilling critical thinking, innovation and scientific vigor in the classroom is the imperative necessity, if our country wants to be on the top in the global scenario. Moreover, inclusive, interactive and intellectual classrooms are the indispensable needs of the nation. It is necessary to develop scientific temper among all the people irrespective of age, caste, creed and religion. The lack of scientific temper weakens our ability to take rational decisions. Thus, the scientific temper of a nation depends on the extensive use of systematic knowledge by its citizens. In fact, for an overall growth and development of any organization or the country as a whole; we have to foster scientific temper in the citizens with absolute capacity for critical evaluation.

#### REFERENCES

- [1] Section (h) in the article 51A of Part IV-A of the Indian Constitution.
- [2]Times Higher Education (THE) World University Rankings 2018.
- [3] The Discovery of India (1946), p. 512, Jawaharlal Nehru.
- [4]Joshi, Ankur; Gupta, Rajen K. (July 2017). "Elementary education in Bharat (that is India): insights from a postcolonial ethnographic study of a Gurukul". International Journal of Indian Culture and Business Management. 15 (1): 100–120
- [5]William Graham Sumner; Folkways: A study of Mores, Manner, Customs and Morals. p. 247.
- [6]Yin Cheong Cheng; Kwok Tung Tsui; King Wai Chow; Magdalena Mo Ching Mok, eds. (2002). Subject Teaching and Teacher Education in the New Century: Research and Innovation. Springer. p. 194